

Translation

PATENT COOPERATION TREATY

PCT/JP2003/013721

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>FWA3-28</b>	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. <b>PCT/JP2003/013721</b>	International filing date (day/month/year) <b>27 October 2003 (27.10.2003)</b>	Priority date (day/month/year) <b>25 October 2002 (25.10.2002)</b>
International Patent Classification (IPC) or national classification and IPC <b>B43K 7/08, 5/02</b>		
Applicant <b>MITSUBISHI PENCIL CO.,LTD.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of <u>11</u> sheets, as follows:
<input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
<input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:
<input checked="" type="checkbox"/> Box No. I Basis of the report
<input type="checkbox"/> Box No. II Priority
<input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI Certain documents cited
<input type="checkbox"/> Box No. VII Certain defects in the international application
<input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand <b>11 March 2004 (11.03.2004)</b>	Date of completion of this report <b>06 December 2004 (06.12.2004)</b>
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/013721

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:

international search (under Rules 12.3 and 23.1(b))  
 publication of the international application (under Rule 12.4)  
 international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

The international application as originally filed/furnished

the description:

pages 1-4, 7-9, 13, 15, 17-20, 22-25, as originally filed/furnished

pages\* 5, 6, 6/1, 10, 11, 12, 14, 14/1, 16, 21 received by this Authority on 18 June 2004 (18.06.2004)

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:

pages 2, as originally filed/furnished

pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19

pages\* 1 received by this Authority on 18 June 2004 (18.06.2004)

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:

pages \_\_\_\_\_, as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_

the claims, Nos. 3 \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (specify): \_\_\_\_\_

any table(s) related to sequence listing (specify): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_

the claims, Nos. \_\_\_\_\_

the drawings, sheets/figs \_\_\_\_\_

the sequence listing (specify): \_\_\_\_\_

any table(s) related to sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP03/13721

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)

Claims \_\_\_\_\_ 1-2 YES

Claims \_\_\_\_\_ NO

Inventive step (IS)

Claims \_\_\_\_\_ 1-2 YES

Claims \_\_\_\_\_ NO

Industrial applicability (IA)

Claims \_\_\_\_\_ 1-2 YES

Claims \_\_\_\_\_ NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP, 2001-353993, A (Mitsubishi Pencil Co., Ltd.), 25 December, 2001, Full text.  
 Document 2: JP, 8-142570, A (Tombow Pencil Co., Ltd.), 04 June, 1996, Full text, Fig. 1.

Document 1 describes the following.

[Claim 1] "An ink following element for an aqueous ball pen, characterized in that the value of  $\tan\delta$  in the entire frequency range of an angular frequency of 0.1-650 rad/set at a temperature of 25°C is 0.1-2".

[Claim 5] "The ink following element as described in any claim of claims 1 to 3, comprising a thickening agent and a base oil composed of a water-insoluble organic solvent with a viscosity of 5 Pa·sec or less at a shear rate of 1-400 sec<sup>-1</sup> and a temperature of 25°C".

[Claim 6] "The ink following element for an aqueous ball pen as described in claim 5, characterized in that the thickening agent is at least one compound selected from the group including ..., olefin crystals – ethylene butylene – olefin crystals block copolymer".

[0023] "DYNARON6200P (trade name, manufactured by JSR Co., Ltd.) is an example of a preferred commercial product of the olefin crystals – ethylene butylene – olefin crystals block copolymer".

Column 10, lines 22-25: "When the inner diameter of the ink accommodation tube increases (for example, when it is more than 3.5 mm), it is preferred that an ink following element with a comparatively low  $\tan\delta$  ( $\tan\delta$  is about 0.1-1) be used.

Document 2 describes a composition for preventing ink evaporation or effusion blocking for aqueous ball pens comprising a polyester thermoplastic elastomer as a thickening agent.

[Claims 1-2]

The inventions described in claims 1-2 appear to possess novelty and involve an inventive step.

In particular, the following technological feature of the inventions described in claims 1-2 is not disclosed in the documents 1-2.

The value of the oil separation degree test (60°C, 2 H) of the ink following element measured according to JIS K 2220-5.7-1993 is 0.2%-15%.

Moreover, this technological feature is not obvious to a person skilled in the art based on documents 1-2.